

REMARKS

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Claims 1-42 are pending the above-referenced application. Claims 2, 8, 9, 16, 17, 22, 23, and 37-42 are rejected in the current Office Action. The drawings are accepted and the Action is non-final. In particular and according to the item number therein, the Office Action has:

In Item 2, objected to claims 3, 8, 9, 17, 22, and 23 as not being cancelled after having been rewritten in independent form;

In Item 3, rejected claims 2, 3, 8, 9, 16, 17, 22, 23 and 37-42 under 35 U.S.C. §112 2nd Paragraph as being indefinite due to inclusion of certain variables;

In Item 7, indicated that claims 1, 4-7, 10-15, 18-21, and 24-36 are allowed; and

In Item 8, indicated that claims 37-42 would be allowable if rewritten to overcome the §112 rejection.

In response to Item 2, Applicants have canceled claims 3, 8, 9, 17, 22, and 23, without prejudice or surrender of subject matter. Applicants thank the Examiner for pointing out the oversight.

In response to Item 3, and in reference to claims 2 and 16 in which the variables $[X_{ih}, Y_{ih}, Z_{ih}, W_i]$ and $[P_{ia...nh}]$ are objected to as being undefined in the claim, Applicants submit that the variables $[X_{ih}, Y_{ih}, Z_{ih}, W_i]$ are well-defined in the specification at page 5 and in FIG. 4B and FIG. 4D. In FIG. 4D, the symbol \tilde{x}_i is the same as X_{ih} , the symbol \tilde{y}_i is the same as Y_{ih} , and \tilde{z}_i is the same as Z_{ih} . To make the typing of these symbols simpler and the printing reliable, the latter form is used. The symbol \tilde{x}_i is the x-coordinate of a vertex of a primitive in homogeneous space and the symbol \tilde{y}_i is the y-coordinate of a vertex of a primitive in homogeneous space, as the language in claim 2 and the antecedent "vertex" in claim indicate. The subscript i in the symbol indicates the particular vertex of the primitive having coordinates \tilde{x}_i and \tilde{y}_i . For a triangle primitive, the subscript takes on values 1 through 3. See FIG. 4C. The variables $[P_{ia...nh}]$ are also well-defined. The symbol P_{iah} is the a th attribute, in homogeneous space, for the i th coordinates of the primitive. The symbol P_{inh} is

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the n th attribute in homogeneous space for the i th coordinates of the primitive. Applicants have changed the symbol $[Pia...nh]$ to the symbol $[Piah...Pinh]$ to make this more clear.

Regarding claim 16, which recites "wherein, for each vertex, the coordinates and attribute in viewer space are represented respectively by $[Xih, Yih, Zih, Wi]$ and $[Piah...Pinh]$, where ' i ' is an index associated with the vertex and $i = 1, 2, 3$, and where Wi is a perspective correction parameter," Applicants believe that the claim adequately describes the meaning of the variables present. They are the coordinates and attributes of a vertex whose antecedent in present in claim 15.

With respect to claims 37-42, the Office Action has rejected these claims on the grounds that variables Xjh , Yjh , and i are not defined. Applicants respectfully submit that these variables are well-defined. The symbol Xjh refers to the homogenous x-coordinate of a vertex of a primitive, where $j = i \bmod 3 + 1$. This means that as i takes on values 1, 2, 3, j takes on values 2, 3, 1. A similar situation is present for the symbol Yjh . Additionally, the symbol Xjk refers to the homogenous x-coordinate of a vertex, but with $k = j \bmod 3 + 1$. This means that as i takes on values 1 through 3, k takes on values 3, 1, 2 (because j takes on values 2, 3, 1). These values are summarized in the table below for convenience.

i	j	k
1	2	3
2	3	1
3	1	2

Thus, in claim 37, where $\tilde{a}_i = Yjh \cdot Wk - Ykh \cdot Wj$, there are actually three homogenous coefficients, \tilde{a}_1 , \tilde{a}_2 , and \tilde{a}_3 , (because i takes on values 1, 2, 3) whose values are computed as $\tilde{a}_1 = Y2h \cdot W3 - Y3h \cdot W2$, $\tilde{a}_2 = Y3h \cdot W1 - Y1h \cdot W3$, $\tilde{a}_3 = Y1h \cdot W2 - Y2h \cdot W1$, where $Y1$, $Y2$ and $Y3$ are the y-coordinates of the vertices of a triangle, and $W1$, $W2$ and $W3$ are the components representing the correction parameters. The equations for the homogeneous coefficients $\tilde{b}_i = Xjh \cdot Wk - Xkh \cdot Wj$ and $\tilde{c}_i = Xjh \cdot Ykh - Xkh \cdot Yjh$ also represent three equations each as i takes on values 1, 2, 3. The Examiner is encouraged to refer to FIG. 4A, and in FIGs. 4C and 4D, the description of i , j and k above equation 2 and equation 6.

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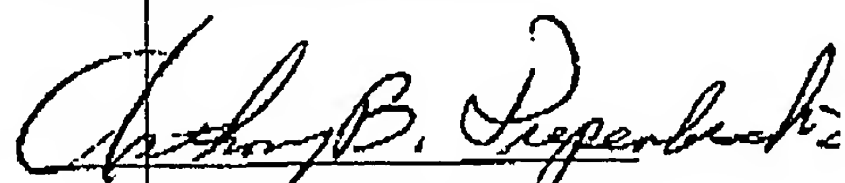
Finally, Applicants have made amendments to certain claims. The amendments to the independent claims include the limitation "computing a set of homogeneous coefficients of the [vertex]triangle based on the viewer space vertex homogeneous coordinates, said homogeneous triangle coefficients including perspective data." This change is a correction as the homogeneous coefficients $\tilde{a}_i, \tilde{b}_i, \tilde{c}_i$ are those that belong to the triangle rather than to a specific vertex. This characterization of the homogeneous coefficients $\tilde{a}_i, \tilde{b}_i, \tilde{c}_i$ is fully supported in the specification at page 5 and 6 and FIGs. 4A (triangle level setup), 4D equation 6. Applicants believe that this change does not affect the scope of the claims or Applicants' arguments regarding the claims. The other amendment regarding the limitation "Wi and Wk are homogeneous components representing perspective correction parameters;" merely clarifies the role of the Wi and Wk parameters.

CONCLUSION

Thus, having responded to each and every ground of rejection and objection, Applicants respectfully request reconsideration and allowance of the pending claims and the new claims in the above-mentioned application.

Date: January 19, 2006

Respectfully submitted



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Date: January 19, 2006



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